#### FIGURE 1

or por p

 ${\tt MDWPHNLLFLLTISIFLGLGQPRSPKSKRKGQGRPGPLAPGPHQVPLDLVSRMKPYARMEEYERNIEEMVA} \\ {\tt QLRNSSELAQRKCEVNLQLWMSNKRSLSPWGYSINHDPSRIPVDLPEARCLCLGCVNPFTMQEDRSMVSVPVFSQVPVRRRLCPPPPRTGPCRQRAVMETIAVGCTCIF} \\$ 

#### FIGURE 4

MTLLPGLLFLTWLHTCLAHHDPSLRGHPHSHGTPHCYSAEELPLGQAPPHLLARGAKWGQALPVALVSSLE
AASHRGRHERPSATTQCPVLRPEEVLEADTHQRSISPWRYRVDTDEDRYPQKLAFAECLCRGCIDARTGRE
TAALNSVRLLQSLLVLRRRPCSRDGSGLPTPGAFAFHTEFIHVPVGCTCVLPRSV

Signal peptide:

Tyrosine kinase phosphorylation site:

N-myristoylation sites:

Leucine zipper pattern:

Homologous region to IL-17:

Amino acids 1-18

Amino acids 112-121

Amino acids

32-38;55-61;133-139

Amino acids 3-25

Amino acids 99-195

GTGCCCGACTTGTGACTGAGTGTGCAGTGCCCAGCATGTACCAGGTCAGTGCAGAGGGCTGCCTGAGGGCT  ${\tt GGACAGTTCTCATTAGCCTTTTCCTACAGGTGGTTGCATTCTTGGCAATGGTCATTGGGAACCCACACCT}$ ACAGCCACTGGCCCAGCTGCCCCAGCAAAGGGCAGCACCTCTGAGGAGCTGCTGAGGTGGAGCACT GTGCCTGTGCCTCCCCTAGAGCCTGCTAGGCCCAACCGCCACCCAGAGTCCTGTAGGGCCAGTGAAGATGGA CCCCTCAACAGCAGGGCCATCTCCCCCTGGAGATATGAGTTGGACAGAGACTTGAACCGGCTCCCCCAGGA GCAACTCGGAGCTGCTCTACCACAACCAGACTGTCTTCTACAGGCGGCCATGCCATGGCGAGAAGGGCACC GATGGGCTAGCCGGACCTGCTGGAGGCTGGTCCCTTTTTGGGAAACCTGGAGCCAGGTGTACAACCACTTG CCATGAAGGGCCAGGATGCCCAGATGCTTGGCCCCTGTGAAGTGCTGTCTGGAGCAGCAGGATCCCGGGAC AGGATGGGGGGCTTTGGGGAAAACCTGCACTTCTGCACATTTTGAAAAGAGCAGCTGCTGCTTAGGGCCGC CGGAAGCTGGTGTCCTGTCATTTTCTCTCAGGAAAGGTTTTCAAAGTTCTGCCCATTTCTGGAGGCCACCA  $\tt CTCCTGTCTCTTTTCCCATCCCTGCTACCCTGGCCCAGCACAGGCACTTTCTAGATATTTCCCC$ GTGCATTCTAGTGTAGTTACTAGTCTTTTGACATGGATGATTCTGAGGAGGAAGCTGTTATTGAATGTATA GAGATTTATCCAAATAAATATCTTTATTTAAAAATGAAAAA

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#### FIGURE 6

MRERPRLGEDSSLISLFLQVVAFLAMVMGTHTYSHWPSCCPSKGQDTSEELLRWSTVPVPPLEPARPNRHP ESCRASEDGPLNSRAISPWRYELDRDLNRLPQDLYHARCLCPHCVSLQTGSHMDPRGNSELLYHNQTVFYR RPCHGEKGTHKGYCLERRLYRVSLACVCVRPRVMG

Signal peptide:

Amino acids 1-32

N-glycosylation site:

Amino acids 136-140

Tyrosine kinase phosphorylation site: Amino acids 127-135

N-myristoylation sites: Amino acids 44-50;150-156

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**ATG**CTGGTAGCCGGCTTCCTGCTGCGCCCCGAGCTGGGCCGCGGGCGCCCCCAGGGCGGCCAGGCC  $\tt CCGGCAGGGGCAGGCCGGCGACCGCCTTCCGGCCGCCCACCAACCTGCGCAGCGTGTCGCCCTGGGC$ GCCTGACCGGGCTGTTCGGCGAGGAGGACGTGCGCTTCCGCAGCGCCCCTGTCTACATGCCCACCGTCGTC CTGCACCTGCGTCCCCGAGCCGGAGAAGGACGCAGCATCAACTCCAGCATCGACAAACAGGGCGCCA GAGCAAACCAAGTGCCGGAGCACCAGCGCCCTTTCCATGGAGACTCGTAAGCAGCTTCATCTGACACGG GCATCCCTGGCTTGCTTTTAGCTACAAGCAAGCAGCGTGGCTGGAAGCTGATGGGAAACGACCCGGCACGG GCATCCTGTGTGCGGCCCGCATGGAGGGTTTGGAAAAGTTCACGGAGGCTCCCTGAGGAGCCTCTCAGATC GGCTGCTGCGGGTGCAGGGCGTGACTCACCGCTGGGTGCTTGCCAAAGAGATAGGGACGCATATGCTTTTT AAAGCAATCTAAAAATAATAATAAGTATAGCGACTATATACCTACTTTTAAAATCAACTGTTTTGAATAGA GGCAGAGCTATTTTATATTATCAAATGAGAGCTACTCTGTTACATTTCTTAACATATAAACATCGTTTTTT ACTTCTTCTGGTAGAATTTTTTAAAGCATAATTGGAATCCTTGGATAAATTTTGTAGCTGGTACACTCTGG GGGCCAGCTAAGAGTTCCAAAGATCTCAGATTTGGTTTTAGTCATGAATACATAAACAGTCTCAAACTCGC ACAATTTTTTCCCCCTTTTGAAAGCCACTGGGGCCAATTTGTGGTTAAGAGGTGGTGAGATAAGAAGTGGA  ${\tt ACGTGACATCTTTGCCAGTTGTCAGAAGAATCCAAGCAGGTATTGGCTTAGTTGTAAGGGCTTTAGGATCA}$ GGCTGAATATGAGGACAAAGTGGGCCACGTTAGCATCTGCAGAGATCAATCTGGAGGCTTCTGTTTCTGCA AAAAGTTAGTAGTTCTTTTTTAAATCATTAAAAGAGGCTTGCTGAAGGAT

# FIGURE 8

 $\verb|MLVAGFLLALPPSWAAGAPRAGRRPARPRGCADRPEELLEQLYGRLAAGVLSAFHHTLQLGPREQARNASC|$  $\verb"PAGGRPGDRRFRPPTNLRSVSPWAYRISYDPARYPRYLPEAYCLCRGCLTGLFGEEDVRFRSAPVYMPTVV"$ LRRTPACAGGRSVYTEAYVTIPVGCTCVPEPEKDADSINSSIDKQGAKLLLGPNDAPAGP

Signal peptide:

Amino acids 1-15

N-glycosylation sites:

Amino acids 68-72;181-185

Tyrosine kinase phosphorylation site: Amino acids 97-106

N-myristoylation sites:

Amino acids 17-23;49-55;74-80;

118-124

Amidation site:

Amino acids 21-25

11 11 1 11 11 11

#### FIGURE 9

# The finite family from the first fame of the family for the family family family from the family family family from the family f

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# FIGURE 10

 $\verb|MTVKTLHGPAMVKYLLLSILGLAFLSEAAARKIPKVGHTFFQKPESCPPVPGGSMKLDIGIINENQRVSMS|$  ${\tt RNIESRSTSPWNYTVTWDPNRYPSEVVQAQCRNLGCINAQGKEDISMNSVPIQQETLVVRRKHQGCSVSFQ}$ LEKVLVTVGCTCVTPVIHHVQ

Signal sequence:

Amino acids 1-30

N-glycosylation site: Amino acids 83-86

N-myristoylation sites:

Amino acids 106-111;136-141

#### FIGURE 11

 $\texttt{CCGGCG} \underline{\textbf{ATG}} \texttt{TCGCTCGTGCTGAAGCCTGGCCGCGCTGTGCAGGAGCCCGTACCCCGAGAGCCGACCGT}$ TCAATGTGGCTCTGAAACTGGGCCATCTCCAGAGTGGATGCTACAACATGATCTAATCCCCGGAGACTTGA GGGACCTCCGAGTAGAACCTGTTACAACTAGTGTTGCAACAGGGGACTATTCAATTTTGATGAATGTAAGC TGGGTACTCCGGGCAGATGCCAGCATCCGCTTGTTGAAGGCCACCAAGATTTGTGTGACGGGCAAAAGCAA  $\tt CTTCCAGTCCTACAGCTGTGAGGTGCAATTACACAGAGGCCTTCCAGACTCAGACCAGACCCTCTGGTG$ GTAAATGGACATTTTCCTACATCGGCTTCCCTGTAGAGCTGAACACGTCTATTTCATTGGGGCCCATAAT ATTCCTAATGCAAATATGAATGAAGATGGCCCTTCCATGTCTGTGAATTTCACCTCACCAGGCTGCCTAGA CCACATAATGAAATATAAAAAAAAGTGTGTCAAGGCCGGAAGCCTGTGGGATCCGAACATCACTGCTTGTA AGAAGAATGAGGAGACAGTAGAAGTGAACTTCACAACCACTCCCCTGGGAAACAGATACATGGCTCTTATC GGTGATTCCAGTGACTGGGGATAGTGAAGGTGCTACGGTGCAGCTGACTCCATATTTTCCTACTTGTGGCA GCGACTGCATCCGACATAAAGGAACAGTTGTGCTCTGCCCACAAACAGGCGTCCCTTTCCCTCTGGATAAC GGCAGGGATCTATCTAATGTGGAGGCACGAAAGGATCAAGAAGACTTCCTTTTCTACCACCACACTACTGC  $\tt CCCCCATTAAGGTTCTTGTGGTTTACCCATCTGAAATATGTTTCCATCACACAATTTGTTACTTCACTGAA$ TTTCTTCAAAACCATTGCAGAAGTGAGGTCATCCTTGAAAAGTGGCAGAAAAAGAAAATAGCAGAGATGGG TCCAGTGCAGTGCCACTCAAAAGAAGCCAGCAGACAAAGTCGTCTTCCTTTCTCAATGACGTCA ACAGTGTGCGATGGTACCTGTGGCAAGAGCGAGGGCAGTCCCAGTGAGAACTCTCAAGACCTCTTCCCC  $\verb|CTTGCCTTTAACCTTTCTGCAGTGATCTAAGAAGCCAGATTCATCTGCACAAATACGTGGTGGTCTACTT|\\$ TAGAGAGATTGATACAAAAGACGATTACAATGCTCTCAGTGTCTGCCCCAAGTACCACCTCATGAAGGATG CCACTGCTTTCTGTGCAGAACTTCTCCATGTCAAGCAGCAGGTGTCAGCAGGAAAAAGATCACAAGCCTGC CACGATGGCTGCTGCTCCTTGTAG

#### FIGURE 12

MSLVLLSLAALCRSAVPREPTVQCGSETGPSPEWMLQHDLIPGDLRDLRVEPVTTSVATGDYSILMNVSWV LRADASIRLLKATKICVTGKSNFQSYSCVRCNYTEAFQTQTRPSGGKWTFSYIGFPVELNTVYFIGAHNIP NANMNEDGPSMSVNFTSPGCLDHIMKYKKKCVKAGSLWDPNITACKKNEETVEVNFTTTPLGNRYMALIQH STIIGFSQVFEPHQKKQTRASVVIPVTGDSEGATVQLTPYFPTCGSDCIRHKGTVVLCPQTGVPFPLDNNK SKPGGWLPLLLLSLLVATWVLVAGIYLMWRHERIKKTSFSTTTLLPPIKVLVVYPSEICFHHTICYFTEFL QNHCRSEVILEKWQKKKIAEMGPVQWLATQKKAADKVVFLLSNDVNSVCDGTCGKSEGSPSENSQDLFPLA FNLFCSDLRSQIHLHKYVVVYFREIDTKDDYNALSVCPKYHLMKDATAFCAELLHVKQQVSAGKRSQACHD GCCSL

Signal sequence:

Amino acids 1-14

Transmembrane domain:

Amino acids 290-309

N-glycosylation sites:

Amino acids 67-70;103-106;156-159;

183-186;197-200;283-286

 $\mathtt{cAMP-}$  and  $\mathtt{cGMP-} \mathtt{dependent}$  protein kinase phosphorylation sites:

Amino acids 228-231;319-322

N-myristoylation site:

Amino acids 116-121

Amidation site:

Amino acids 488-491

#### FIGURE 13

ACACTGGCCAAACAAAACGAAAGCACTCCGTGCTGGAAGTAGGAGGAGAGTCAGGACTCCCAGGACAGAG AGTGCACAAACTACCCAGCACAGCCCCCTCCGCCCCTCTGGAGGCTGAAGAGGGATTCCAGCCCCTGCCA GCCACCTGGCACCTAGAAGATGCCTGTGCCCTGGTTCTTGCTGTCCTTGGCACTGGGCCGAAGCCCAGTGG TCCTTTCTCTGGAGAGGCTTGTGGGGCCTCAGGACGCTACCCACTGCTCTCCGGGCCTCTCCTGCCGCCTC TGGGACAGTGACATACTCTGCCTGCCTGGGGACATCGTGCCTGCTCCGGGCCCCGTGCTGCCGCCTACGCA ACTTGGCCGTGCATGGGCACTGGGAAGAGCCTGAAGATGAGGAAAAGTTTGGAGGAGCAGCTGACTCAGGG GTGGAGGAGCCTAGGAATGCCTCTCCCAGGCCCAAGTCGTGCTCTCCTTCCAGGCCTACCCTACTGCCCG  $\tt CTGCGTCCTGCTGGAGGTGCAAGTGCCTGCTGCCCTTGTGCAGTTTGGTCAGTCTGTGGGCTCTGTGGTATAT$ GACTGCTTCGAGGCTGCCCTAGGGAGTGAGGTACGAATCTGGTCCTATACTCAGCCCAGGTACGAGAAGGA ACTCAACCACACAGCAGCTGCCTGCCCTGCCCTGGCTCAACGTGTCAGCAGATGGTGACAACGTGCATC TGGTTCTGAATGTCTCTGAGGAGCAGCACTTCGGCCTCTCCCTGTACTGGAATCAGGTCCAGGGCCCCCCA CCTCTGTATTCAGGTGTGGCCTCTGGAACCTGACTCCGTTAGGACGAACATCTGCCCCTTCAGGGAGGACC GGTCCCACCGCTTTCCTGGGAGAACGTCACTGTGGACAAGGTTCTCGAGTTCCCATTGCTGAAAGGCCACC  $\verb|CTAACCTCTGTGTTCAGGTGAACAGCTCGGAGAAGCTGCAGCTGCAGGAGTGCTTGTGGGGCTGACTCCCTG|\\$ GGGCCTCTCAAAGACGATGTGCTACTGTTGGAGACACGAGGCCCCCAGGACAACAGATCCCTCTGTGCCTT GGAACCCAGTGGCTGTACTTCACTACCCAGCAAAGCCTCCACGAGGGCAGCTCGCCTTGGAGAGTACTTAC TACAAGACCTGCAGTCAGGCCAGTGTCTGCAGCTATGGGACGATGACTTGGGAGCGCTATGGGCCTGCCCC CCTCATCCTCCTCTCAAAAAGGATCACGCGAAAGGGTGGCTGAGGCTCTTGAAACAGGACGTCCGCTCGG GGGCGCCGCCAGGGCCCGCGGCTCTGCTCCTCTACTCAGCCGATGACTCGGGTTTCGAGCGCCTGGTG GGCGCCCTGGCGTCGCCCTGTGCCAGCTGCCGCTGGGCCGTAGACCTGTGGAGCCGTCGTGAACT GAGCGCGCAGGGGCCCGTGGCTTGGTTTCACGCGCAGCCGCCGCAGACCCTGCAGGAGGGCGGCGTGGTGG TCTTGCTCTTCTCCCGGTGCGGTGGCGCTGTGCAGCGAGTGGCTACAGGATGGGGTGTCCGGGCCCGGG GCCCGGCAGCTACGTGGGGGCCTGCTTCGACAGGCTGCTCCACCCGGACGCCGTACCCGCCCTTTTCCGCA CCGTGCCCGTCTTCACACTGCCCTCCCAACTGCCAGACTTCCTGGGGGCCCTGCAGCAGCCTCGCGCCCCG CCATCCCCGGGGACTCCCGCGCCCGGGACGGGGTGGGACCAGGGGCGGGACCTGGGGCGGGGACGGGA CTTAAATAAAGGCAGACGCTGTTTTTCTAAAAAAA

#### FIGURE 14

MPVPWFLLSLALGRSPVVLSLERLVGPQDATHCSPGLSCRLWDSDILCLPGDIVPAPGPVLAPTHLQTELV LRCQKETDCDLCLRVAVHLAVHGHWEEPEDEEKFGGAADSGVEEPRNASLQAQVVLSFQAYPTARCVLLEV QVPAALVQFGQSVGSVVYDCFEAALGSEVRIWSYTQPRYEKELNHTQQLPALPWLNVSADGDNVHLVLNVS EEQHFGLSLYWNQVQGPPKPRWHKNLTGPQIITLNHTDLVPCLCIQVWPLEPDSVRTNICPFREDPRAHQN LWQAARLRLLTLQSWLLDAPCSLPAEAALCWRAPGGDPCQPLVPPLSWENVTVDKVLEFPLLKGHPNLCVQ VNSSEKLQLQECLWADSLGPLKDDVLLLETRGPQDNRSLCALEPSGCTSLPSKASTRAARLGEYLLQDLQS GQCLQLWDDDLGALWACPMDKYIHKRWALVWLACLLFAAALSLILLLKKDHAKGWLRLLKQDVRSGAAARG  ${\tt RAALLLYSADDSGFERLVGALASALCQLPLRVAVDLWSRRELSAQGPVAWFHAQRRQTLQEGGVVVLLFSP}$ GAVALCSEWLQDGVSGPGAHGPHDAFRASLSCVLPDFLQGRAPGSYVGACFDRLLHPDAVPALFRTVPVFT  $\verb|LPSQLPDFLGALQQPRAPRSGRLQERAEQVSRALQPALDSYFHPPGTPAPGRGVGPGAGPGAGDGT|$ 

signal sequence:

Amino acids 1-20

transmembrane domain:

Amino acids 453-473

N-glycosylation sites:

Amino acids 118-121;186-189;198-201;

211-214;238-241;248-251;334-337;

357-360;391-394

Glycosaminoglycan attachment site: Amino acids 583-586

cAMP- and cGMP-dependent protein kinase phosphorylation site:

Amino acids 552-555

N-myristoylation sites:

Amino acids 107-112;152-157;319-324;

438-443;516-521;612-617;692-697;

696-701;700-705

#### FIGURE 15

 $\texttt{CCATGTTCCGGGAGCCCTAATTGCACAGAAGCCC} \underline{\textbf{ATG}} \texttt{GGGAGCTCCAGACTGGCAGCCCTGCTCCTGCCTC}$ TCCTCCTCATAGTCATCGACCTCTCTGACTCTGCTGGGATTGGCTTTCGCCACCTGCCCCACTGGAACACC CGCTGTCCTCTGGCCTCCCACACGGATGACAGTTTCACTGGAAGTTCTGCCTATATCCCTTGCCGCACCTG  $\tt GTGGGCCCTCTTCTCCACAAAGCCTTGGTGTGTGCGAGTCTGGCACTGTTCCCGCTGTTTGTGCCAGCATCTGCAGCATCTGCCAGCATCTGCCAGCATCTGCCAGCATCTGCAGCATCTGCAGCATCTGCAGCATCTGCAGCATCTGCAGCAGCATCTGCAGCAGCATCTGCAGCATCTGCAGCAATCTGCAGCATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTGCAATCTAATCAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCAATCAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCTAATCAATCAATCAATCTAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATCAATC$ TGTCAGGTGGCTCAGGTCTTCAACGGGGCCTCTTCCACCTCCTGGTGCAGAAATCCAAAAAGTCTTCCACA TTCAAGTTCTATAGGAGACACAAGATGCCAGCACCTGCTCAGAGGAAGCTGCTGCCTCGTCGTCACCTGTC TGAGAAGAGCCATCACATTTCCATCCCCTCCCCAGACATCTCCCACAAGGGACTTCGCTCTAAAAGGACCC AACCTTCGGATCCAGAGACATGGGAAAGTCTTCCCAGATTGGACTCACAAAGGCATGGAGGACCCGAGTTC TCCTTTGATTTGCTGCCTGAGGCCCGGGCTATTCGGGTGACCATATCTTCAGGCCCTGAGGTCAGCGTGCG  $\verb|TCTTTGTCACCAGTGGGCACTGGAGTGTGAAGAGCTGAGCAGTCCCTATGATGTCCAGAAAATTGTGTCTG|$ GAGGACACTGTGAGGCCCAAAAAATGTCCCTTCCAGAGCTGGCCAGAAGCCTATGGCTCGGACTTCTGGAA GTCAGTGCACTTCACTGACTACAGCCAGCACACTCAGATGGTCATGGCCCTGACACTCCGCTGCCCACTGA AGCTGGAAGCTGCCCTCTGCCAGAGGCACGACTGGCATACCCTTTGCAAAGACCTCCCGAATGCCACGGCT  $\tt CGAGAGTCAGATGGGTGGTATGTTTTGGAGAAGGTGGACCTGCACCCCAGCTCTGCATCCAAGTTCTCTTT$ TGGAAACAGCAGCCATGTTGAATGCCCCCACCAGACTGGGTCTCTCACATCCTGGAATGTAAGCATGGATA CCAGGCTTGGGGCAGGACACTTTGGTGCCCCCCGTGTACACTGTCAGCCAGGCCCGGGGCTCAAGCCCAGT GTCACTAGACCTCATCCTTCCTGAGGCCAGGGTGCTGTGTCCTGGTGTGGCGGTCAGATGTCCAGT  $\verb|TTGCCTGGAAGCACCTCTTGTGTCCAGATGTCTCTTACAGACACCTGGGGCTCTTGATCCTGGCACTGCTG|$ GCCCTCCTCACCCTACTGGGTGTTGTTCTGGCCCTCACCTGCCGGCGCCCACAGTCAGGCCCGGGCCCAGC GCGGCCAGTGCTCCTCCTGCACGCGGCGGACTCGGAGGCGCAGCGGCGCCTGGTGGGAGCGCTGAAC GGGCCCGCTGCCGTGGCTCTGGGCGGCGCGCGCGCGCGTAGCGCGGGAGCAGGGCACTGTGCTGCTGCTGT GCTGCCCGCGCCCGCTGCTGCTCGCTTACTTCAGTCGCCTCTGCGCCAAGGGCGACATCCCCCCGCC  $\tt AGCCGGCTTGAACGAGAGCCGCCCGACTTGCAGACCTAGGTTGAGCAGAGCTCCACCGCAGTCCCGGGTGTCT$ 

#### FIGURE 16

MGSSRLAALLLPLLLIVIDLSDSAGIGFRHLPHWNTRCPLASHTDDSFTGSSAYIPCRTWWALFSTKPWCV RVWHCSRCLCQHLLSGGSGLQRGLFHLLVQKSKKSSTFKFYRRHKMPAPAQRKLLPRRHLSEKSHHISIPS PDISHKGLRSKRTQPSDPETWESLPRLDSQRHGGPEFSFDLLPEARAIRVTISSGPEVSVRLCHQWALECE ELSSPYDVQKIVSGGHTVELPYEFLLPCLCIEASYLQEDTVRRKKCPFQSWPEAYGSDFWKSVHFTDYSQH  ${\tt TQMVMALTLRCPLKLEAALCQRHDWHTLCKDLPNATARESDGWYVLEKVDLHPQLCFKFSFGNSSHVECPH}$  $\verb|QTGSLTSWNVSMDTQAQQLILHFSSRMHATFSAAWSLPGLGQDTLVPPVYTVSQARGSSPVSLDLIIPFLR|$  ${\tt PGCCVLVWRSDVQFAWKHLICPDVSYRHLGLLILALLALLTLLGVVLALTCRRPQSGPGPARPVLLLHAAD}$ SEAQRRLVGALAELLRAALGGGRDVIVDLWEGRHVARVGPLPWLWAARTRVAREQGTVLLLWSGADLRPVS GPDPRAAPLLALLHAAPRPLLLLAYFSRLCAKGDIPPPLRALPRYRLLRDLPRLLRALDARPFAEATSWGR LGARQRRQSRLELCSRLEREAARLADLG

Signal peptide:

Amino acids 1-23

Transmembrane domain:

Amino acids 455-472

N-glycosylation sites:

Amino acids 318-322;347-351;364-368

Glycosaminoglycan attachment site: Amino acids 482-486

cAMP- and cGMP-dependent protein kinase phosphorylation sites:

Amino acids 104-108;645-649

Tyrosine kinase phosphorylation site: Amino acids 322-329

N-myristoylation sites:

Amino acids 90-96;358-364;470-476

Eukaryotic cobalamin-binding proteins: Amino acids 453-462

#### FIGURE 17

GAAACAGTGGGCTGTACAACATCACCTTCAAATATGACAATTGTACCACCTACTTGAATCCAGTGGGGAAG CATGTGATTGCTGACGCCCAGAATATCACCATCAGCCAGTATGCTTGCCATGACCAAGTGGCAGTCACCAT  $\verb|TCTTTGGTCCCAGGGGCCCTCGGCATCGAATTCCTGAAAGGATTTCGGGTAATACTGGAGGAGCTGAAGT| \\$ CGGAGGGAAGACAGTGCCAACAACTGATTCTAAAGGATCCGAAGCAGCTCAACAGTAGCTTCAAAAGAACT GGAATGGAATCTCAACCTTTCCTGAATATGAAATTTGAAACGGATTATTTCGTAAAGGTTGTCCCTTTTCC TTCCATTAAAAACGAAAGCAATTACCACCCTTTCTTCTTTAGAACCCGAGCCTGTGACCTGTTGTTACAGC AGGTGTCCTTCGACCACGCACGCATGGCTCGGACATGCAGGTGTCCTTCGACCACGCACCGCACAACTTC GGCTTCCGTTTCTTCTATCTTCACTACAAGCTCAAGCACGAAGGACCTTTCAAGCGAAAGACCTGTAAGCA GGAGCAAACTACAGAGATGACCAGCTGCCTCCTTCAAAATGTTTCTCCAGGGGATTATATAATTGAGCTGG  $\tt TGGATGACACTAACACAAGAAAAGTGATGCATTATGCCTTAAAGCCAGTGCACTCCCCGTGGGCCGGG$ CCCATCAGAGCCGTGGCCATCACAGTGCCACTGGTAGTCATATCGGCATTCGCGACGCTCTTCACTGTGAT GTGCCGCAAGAAGCAACAAGAAAATATATTCACATTTAGATGAAGAGAGCTCTGAGTCTTCCACATACA CTGCAGCACTCCCAAGAGAGGGCTCCGGCCGCCGCCGAAGGTCTTTCTCTGCTATTCCAGTAAAGATGGC CAGAATCACATGAATGTCGTCCAGTGTTTCGCCTACTTCCTCCAGGACTTCTGTGGCTGTGAGGTGGCTCT GGACCTGTGGGAAGACTTCAGCCTCTGTAGAGAAGGGCAGAGAATGGGTCATCCAGAAGATCCACGAGT CCCAGTTCATCATTGTGGTTTGTTCCAAAGGTATGAAGTACTTTGTGGACAAGAAGAACTACAAAACACAAA GGAGGTGGCCGAGGCTCGGGGAAAGGAGAGCTCTTCCTGGTGGCGGTGTCAGCCATTGCCGAAAAGCTCCG CCAGGCCAAGCAGAGTTCGTCCGCGGCGCTCAGCAAGTTTATCGCCGTCTACTTTGATTATTCCTGCGAGG GAGACGTCCCCGGTATCCTAGACCTGAGTACCAAGTACAGACTCATGGACAATCTTCCTCAGCTCTGTTCC CACCTGCACTCCCGAGACCACGGCCTCCAGGAGCCGGGGCAGCACACGCGACAGGGCAGCAGAAGGAACTA CCGACTGGTTCGAAAAGCAGTTCGTTCCCTTCCATCCTCCACTGCGCTACCGGGAGCCAGTCTTGGAG AAATTTGATTCGGGCTTGGTTTTAAATGATGTCATGTGCAAACCAGGGCCTGAGAGTGACTTCTGCCTAAA GGTAGAGGCGGCTGTTCTTGGGGCAACCGGACCAGCCGACTCCCAGCAGAGAGTCAGCATGGGGGCCTGG GCCGGCAGCCCTCGGACATGCCGCGGGACTCAGGCATCTATGACTCGTCTGTGCCCTCATCCGAGCTGTC TCTGCCACTGATGGAAGGACTCTCGACGGACCAGACAGAAACGTCTTCCCTGACGGAGAGCGTGTCCTCCT GATCTTGGTTGCCGCAGCTACACTGATGAACTCCACGCGGTCGCCCCTTTGTAACAAAACGAAAAGAGTCTA 

#### FIGURE 18

MPRASASGVPALFVSGEQGVGPASRNSGLYNITFKYDNCTTYLNPVGKHVIADAQNITISQYACHDQVAVT ILWSPGALGIEFLKGFRVILEELKSEGRQCQQLILKDPKQLNSSFKRTGMESQPFLNMKFETDYFVKVVPF PSIKNESNYHPFFFRTRACDLLLQPDNLACKPFWKPRNLNISQHGSDMQVSFDHAPHGSDMQVSFDHAPHN FGFRFFYLHYKLKHEGPFKRKTCKQEQTTEMTSCLLQNVSPGDYIIELVDDTNTTRKVMHYALKPVHSPWA GPIRAVAITVPLVVISAFATLFTVMCRKKQQENIYSHLDEESSESSTYTAALPRERLRPRPKVFLCYSSKD GONHMNVVQCFAYFLQDFCGCEVALDLWEDFSLCREGQREWVIQKIHESQFIIVVCSKGMKYFVDKKNYKH  $\tt KGGGRGSGKGELFLVAVSAIAEKLRQAKQSSSAALSKFIAVYFDYSCEGDVPGILDLSTKYRLMDNLPQLC$  $\verb|shlhsrdhglqepgqhtrqgsrnyfrsksgrslyvaicnmhqfideepdwfekqfvpfhppplryrepvl|$  ${\tt EKFDSGLVLNDVMCKPGPESDFCLKVEAAVLGATGPADSQHESQHGGLDQDGEARPALDGSAALQPLLHTV}$ KAGSPSDMPRDSGIYDSSVPSSELSLPLMEGLSTDQTETSSLTESVSSSSGLGEEEPPALPSKLLSSGSCK ADLGCRSYTDELHAVAPL

Transmembrane domain:

Amino acids 283-307

N-qlycosylation sites:

Amino acids 31-34;38-41;56-59; 113-116;147-150;182-185;266-269

Glycosaminoglycan attachment sites: Amino acids 433-436;689-692

cAMP- and cGMP-dependent protein kinase phosphorylation: Amino acids 232-235

Tyrosine kinase phosphorylation sites: Amino acids 312-319;416-424

N-myristoylation site:

Amino acids 19-24;375-380;428-433; 429-434; 432-437; 517-522; 574-579; 652-657;707-712

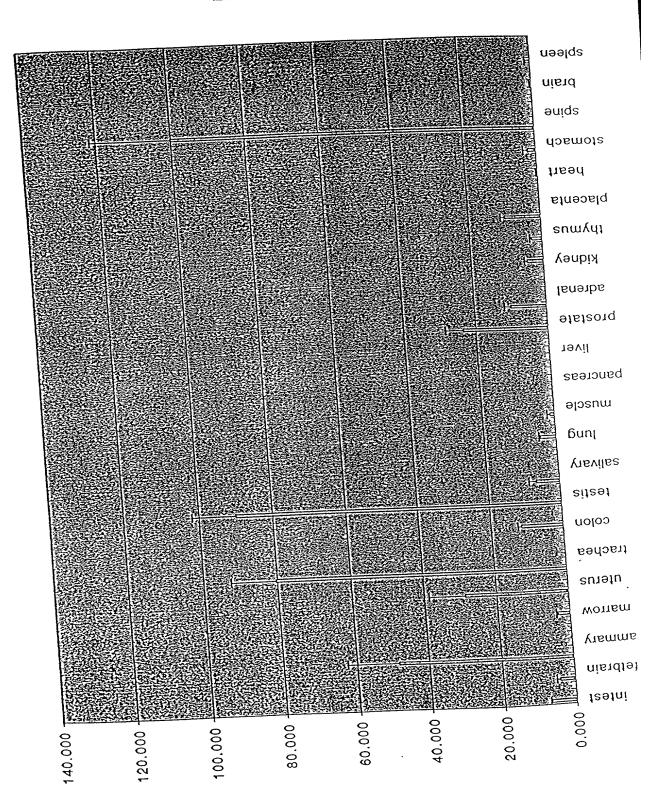
# FIGURE 19

h-IL17	1 ALLEN TERMINATER TERMINATER TO THE TERMI
h-IL17B	1 MOWPHNILFLITISIFLGLGOPASPKSKAKGOGAPGPLAPGP
h-IL17C	1 MTLLPGLLFLTWLHTCLAHHDPSLRGHPKSHGTPHCYSAEELPLGOAPPH
h-IL17D	1
h-IL17E	1
h-IL17F	1 MTVKTLHGPAMVKYLLLSILGLAFLSEAAARKIPKVG
h-IL17	30 NPGCPNSEDKNEPRTVMVN[ NIHNRNININPK RSSD
h-IL17B	43 HOVPLOLVSRMKPYARMEEYERNIEEMVAOLRMSSELAORKCEVNLOLWM
h-IL17C	51 LLARGAK WGOALPVALVS SLEAASHRGRHERPSATTOCPVLRPEEVLEAD
h-IL17D	36 EELLEQLYGRLAAGVLSAFHHTLQLGPREQARMASCPAGGRPADRRFRPP
h-IL17E	36 WPSCCPSKGQDTSEELLRWSTVPVPPLEPARPNRHPESCRAS EDGP
h-IL17F	38 HTEFOKPESCPPVPGGSMK LOIGIINENORVS
15171	30 HTTT QKT EGOTT TO GOT MILES
h-IL17	66 YYNRSTSPWNLHRNEDPERYPSVIWEAKCRHLGCINAD - GNVDYHMNSVP
h-1L17B	93 SMKRSLSPWGYSINHOPSRIPYDLPEARCLCLGCVNPFTMOEDRSMVSVP
h-IL17C	101 THORSISPWRYRVDTOEDRYPOKLAFAECLCRGCIDARTGRETAALNSVR
h-IL17D	86 THILR SIVS PWAYR IS YD PAR Y PRYLIPE AYCL CRGCL TGL FGEE DV R F RISAP
h-IL17E	82 LINSRAISPWRITELORDL NRLPQDLY HARCLCPHCV SLOTGSHMDPAGNSE
h-IL17F	74 IESRSTSPWNYTVTWDPNRYPSEVVOAOCRNLGCINAO GKEDISMNSVP
11 15171	W. 1.6.9 W. 0.1.0.1. W.
h-IL17	115 LODE LEVERRE . PPHCPNSFPLEKILVSVGCTCVTPLVHHVA
h-IL17B	163 VESOVPVERRICPPP PRIGPCHORAVMETIAVGCTCLE
h-IL17C	151 LLOSLEVERRRECSPOGSGEPTPGAFAFHTEFIHVPVGCTCVLPRSV -
h-IL17D	136 VYMPTVVLRRTPACAG. · · · · GRSVYTEAYVTIPVGCTCVPEPEKDAD
h~IL17E	132 LLYHNQTVFYRRPCHGEK - GTHKGYCLERRLYRVSLACVCVRPRVMG.
h-IL17F	123 1 QQE TL VVR RK HOGCS V SFOLEK V L VTVGCT C VT PV I HHVO
h-IL17D	179 SINSSIDKQGAKLLLGPNDAPAGPX

17 7 101

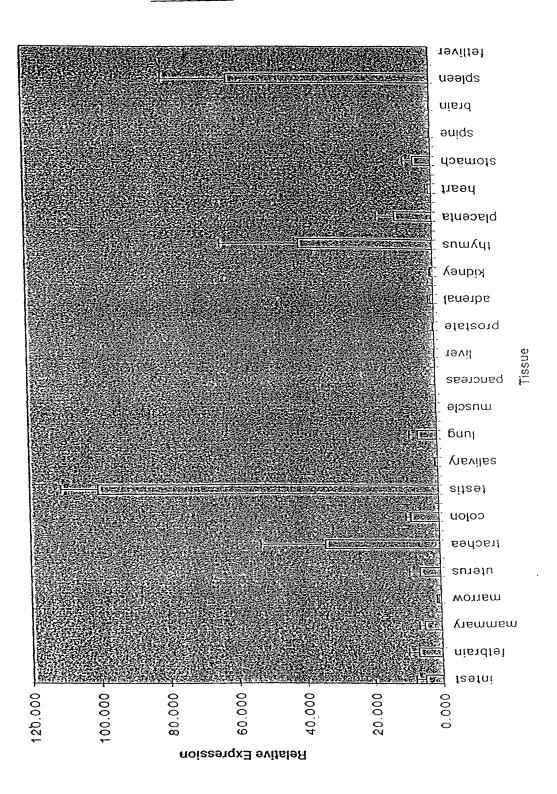
11 111

FIGURE 20



IL17B distribution

# FIGURE 21

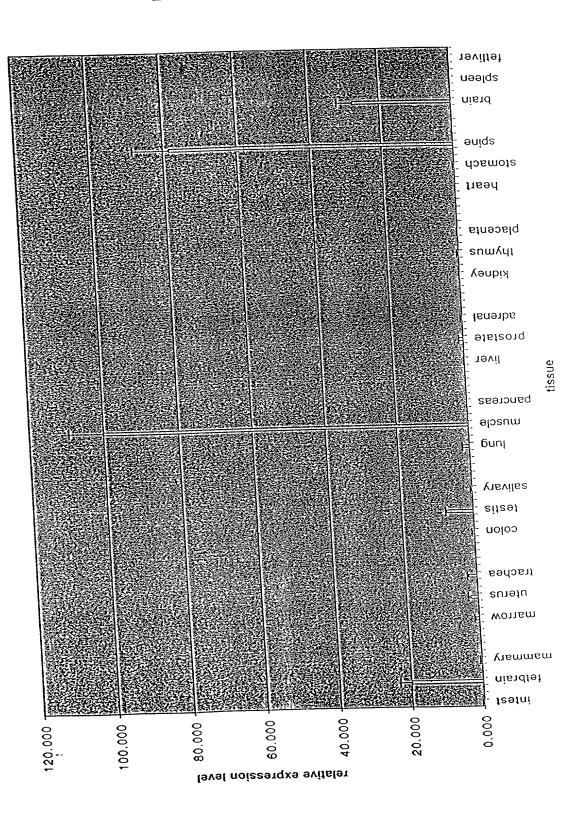


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IL17C Distribution

排 接触器 網州 通报图 1881年5月11日18日 1414年11日

FIGURE 22



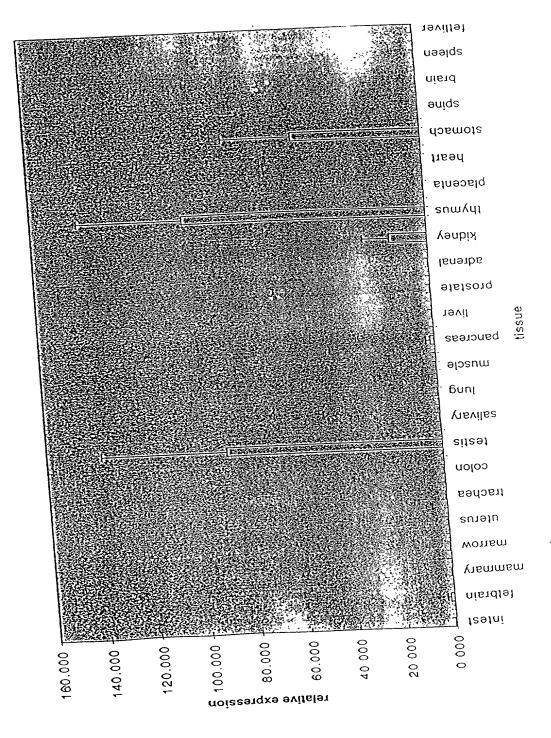
IL17D Distribution

. •

Brain
heart
kidney
liver
lung
colon
marrow
intestine
spleen
stomach
thymus
prostate
muscle
testis
testis
uterus
fetal brain
fetal brain
fetal brain
fetal brain
fetal spinal chord
placenta
adrenal
pancreas
salivary
trachea

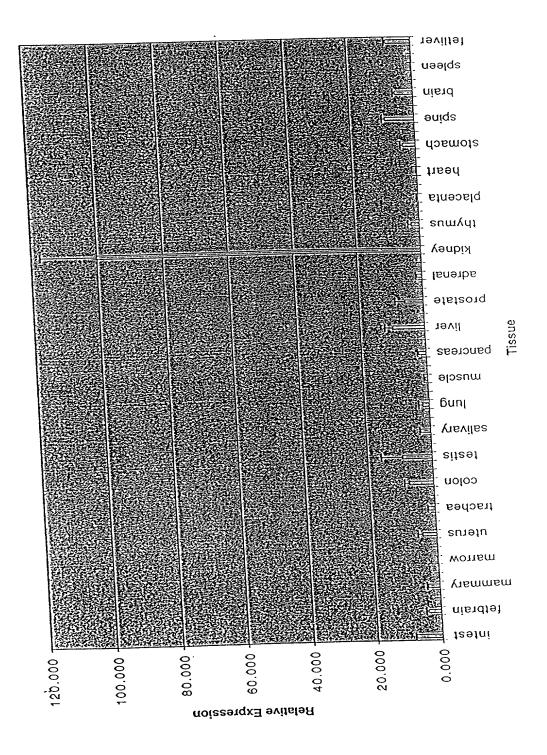
The second secon

FIGURE 24



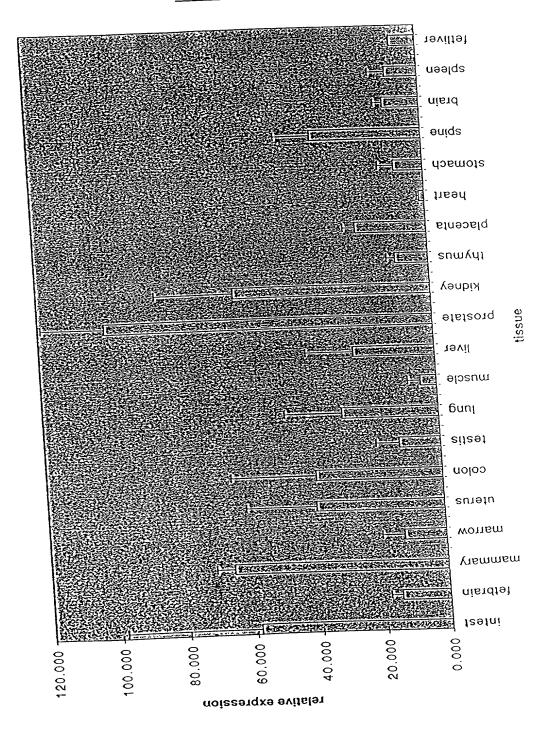
IL17 F Distribution

FIGURE 25



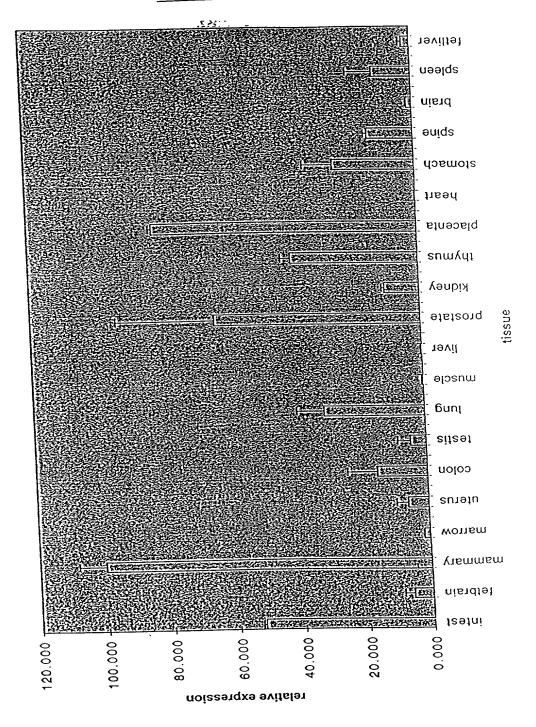
IL17Rhom-1 Distribution

# **||**|



RH2 distribution

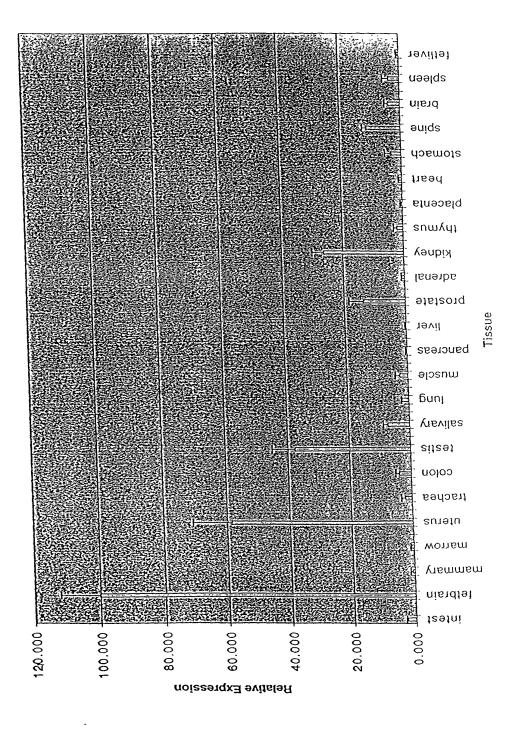
FIGURE 27



RH3 distribution

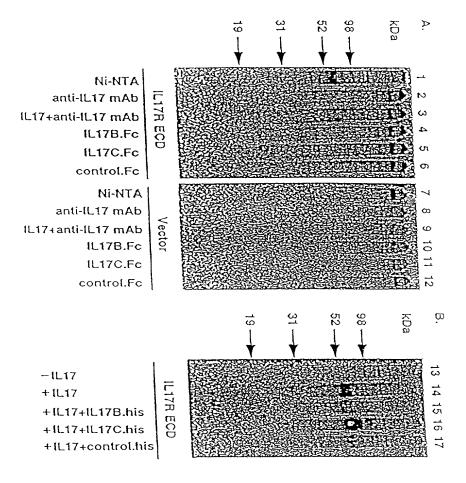
**T**IF 1 III

FIGURE 28



IL17 RH4 distribution

n we in Mile II



 $0.244400 \pm 100$ 

| 10

h-1L17 h-1L178 h-1L17C h-1L17E	1 MTPGKTSUVSETLLUSUEAIVKAGITIPR
h-1L17 h-1L17B h-1L17C h-1L17E	30
h-IL17 h-IL17B h-IL17C h-IL17E	63 - SSDYYNASTSPWNLHRNEDPERYPSVIWEAKCAHLGCINADG - NVDY 89 QLWMSNKRSLSPWGYSINHDPSRIPVDLPEARCLCLGCVNPFTMQEDAS 97 LEADTHQASISPWRYAVOTDEDRYPOKLAFAECLCAGCIDARTG - RETA 79 - DGPLNSAALSPWRYELDADLNALPQDLYHARCLCPHCVSLQTGSHMDP
h-IL17 h-IL17B h-IL17C h-IL17E	110MNSVPIQQEILVLRREPPHCPNSFRLEKILVSVGCTCVTP 139VSVPVFSQVPVRRRLCPPPPRTGPCRQRAVMETIAVGCTCIF. 146LNSVRULQSLLVLRRRPCSRDGSGLPTPGAFAFHTEFIHVPVGCTCVLP 128GNSELLYHN;Q;TVFYRRPCHGEKGTHKGYCLERRLYRVSLACVCVRP
h-1L17 h-1L17C h-1L17E	15 IVH H V A 196S V 17 EVM G

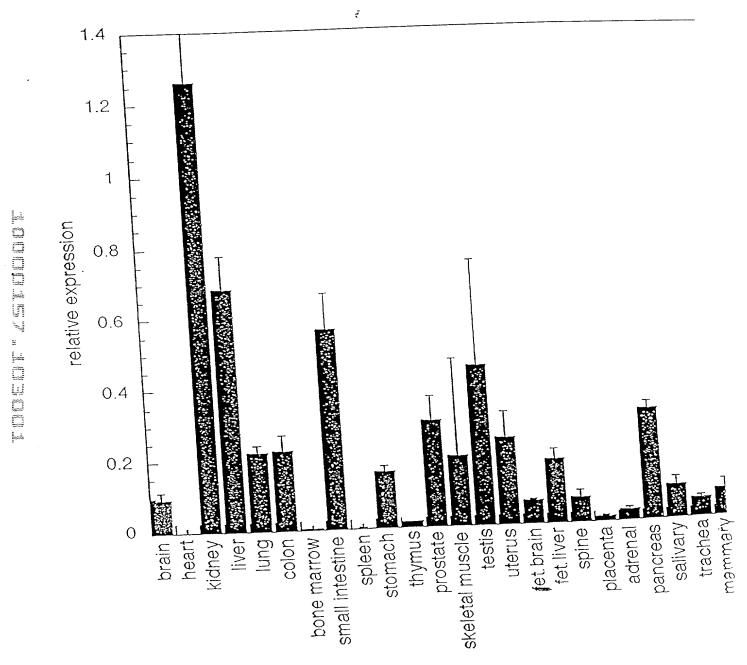
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1

# FIGURE 31A

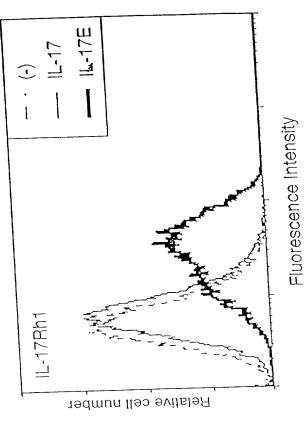
Peripheral blood leuk.	Lung	Placenta	Small intestine	Liver	Kidney	Spleen	Thymus	Colon (no mucosa)	Skeletal muscle	Heart	Brain	
												7.
												-4
												2
												1.

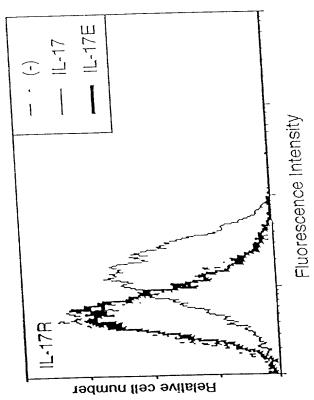
FIGURE 31B



Tissue

FIGURE 32A





# FIGURE 32B

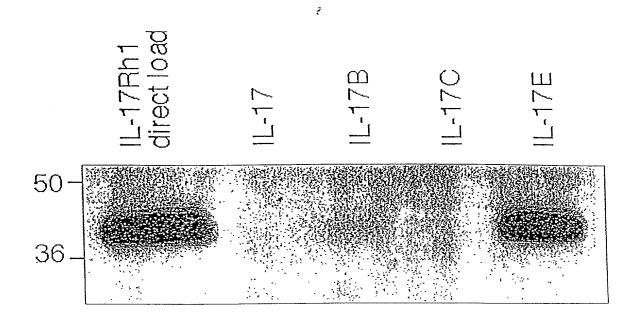
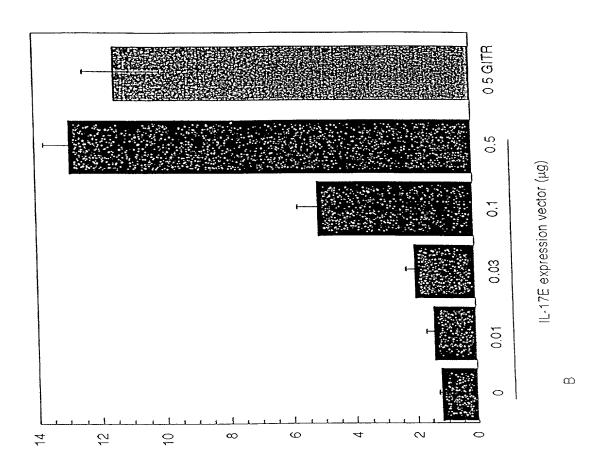


FIGURE 33



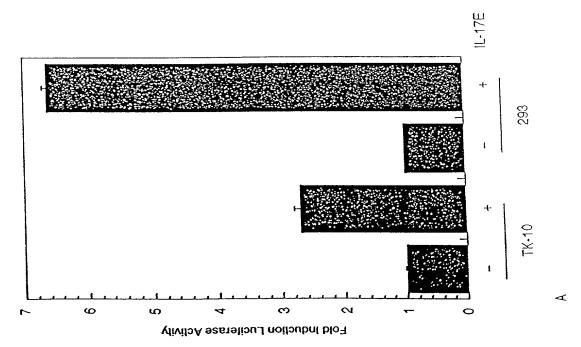
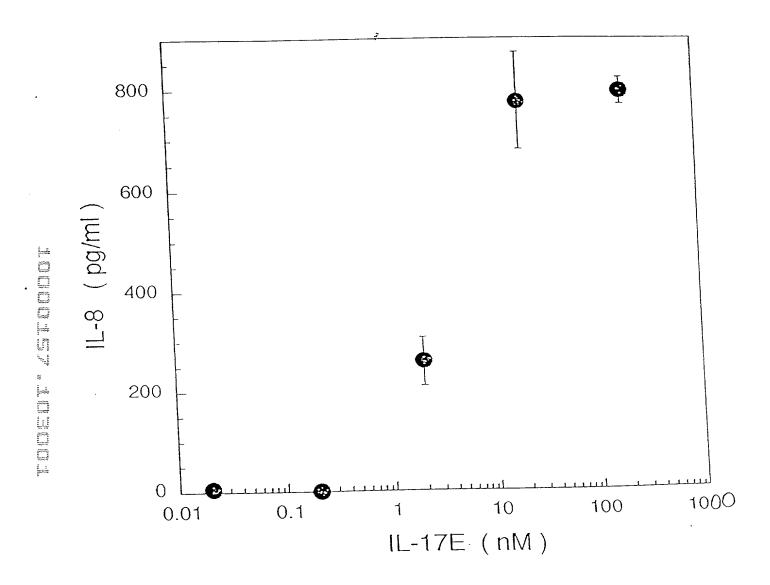
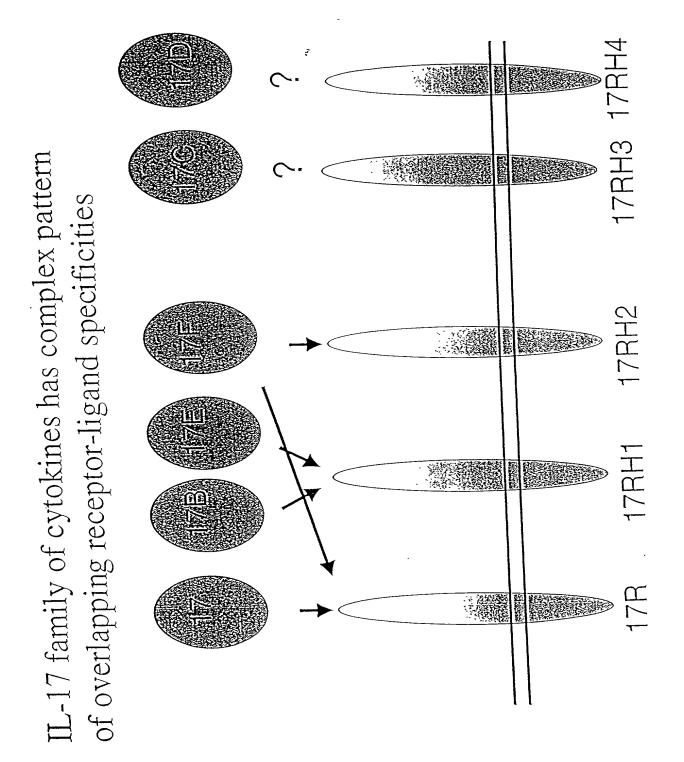


FIGURE 34

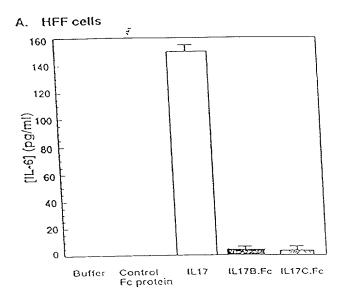


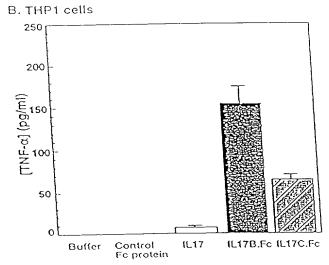
. . . . .

FIGURE 35



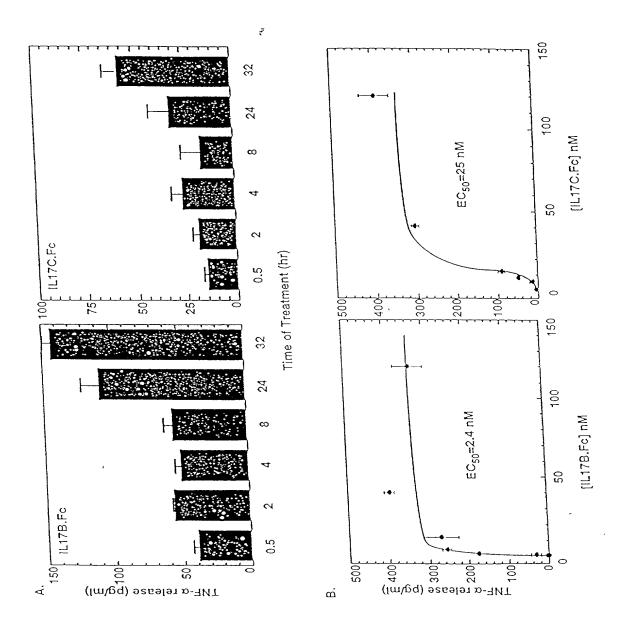
· III II

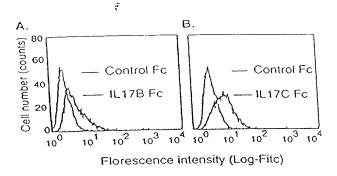




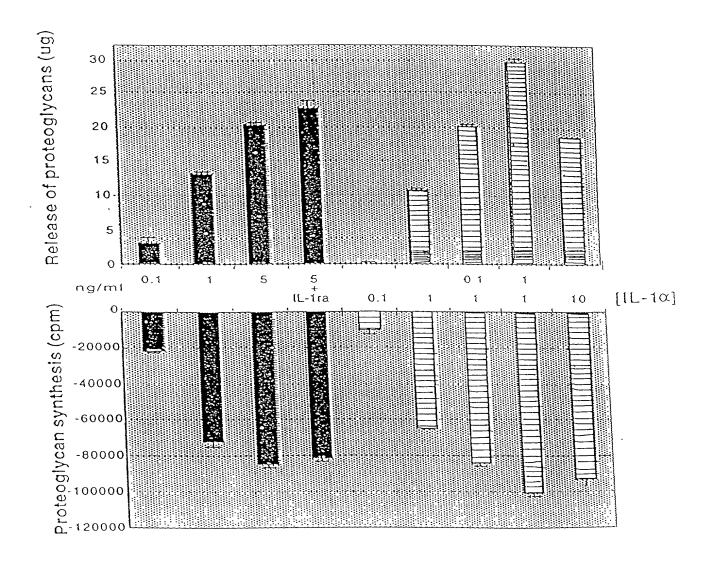
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BROWN CONTRACTOR OF CARE.

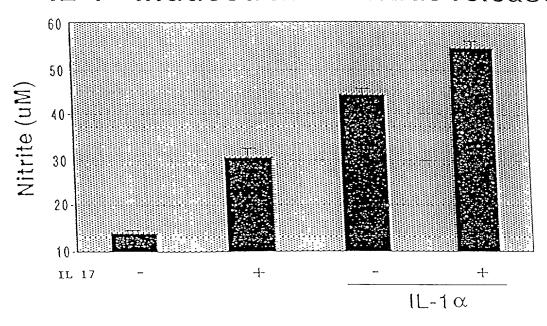




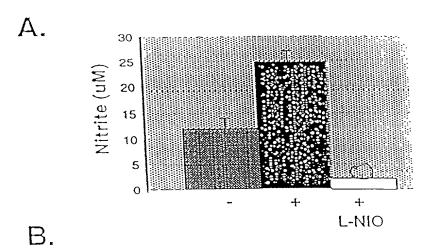
# IL-17 induces breakdown and inhibits synthesis of cartilage matrix

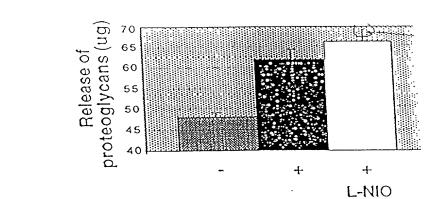


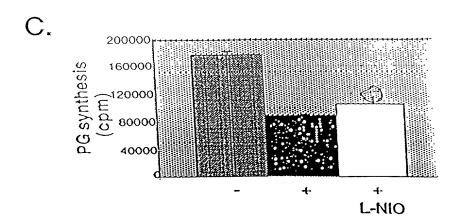
# IL-10-induced nitric oxide release



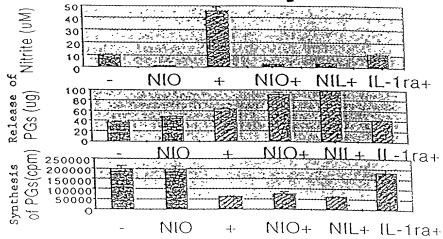
Inhibition of nitric oxide release does not block the detrimental effects of 1L-17 on matrix breakdown or synthesis





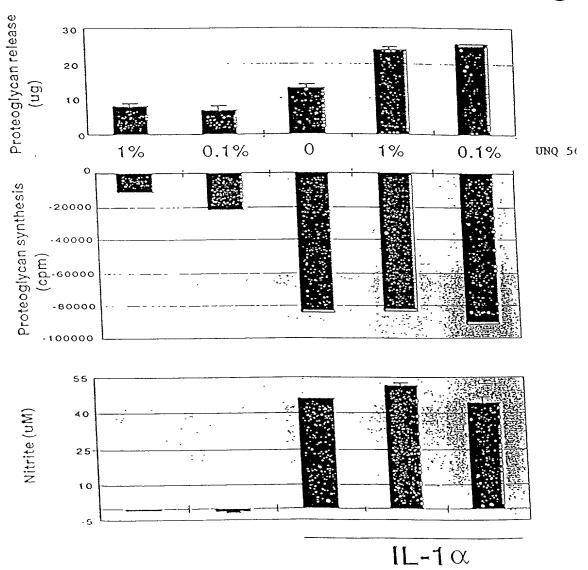


INUIDITION Of NO release enhances induced matrix breakdown but not matrix synthesis



# , IL-17C

# detrimental effects on articular cartilage



Expression of IL-17 Family in Mouse Model of IBD Inflammatory Bowel Disease:

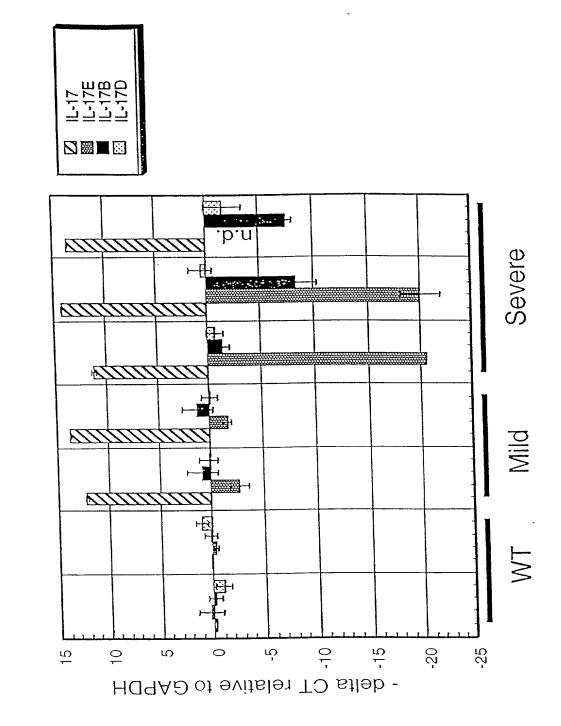
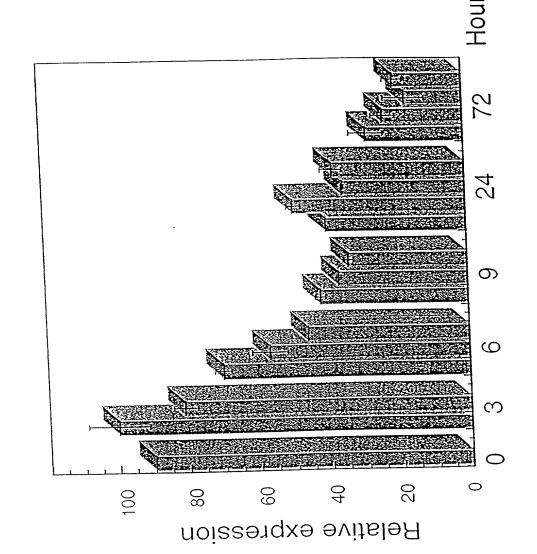


FIGURE 44

IL-17D, present in brain, decreases rapidly following stroke



0*L/L*7

WWW. The transfer of the second second

FIGURE 46

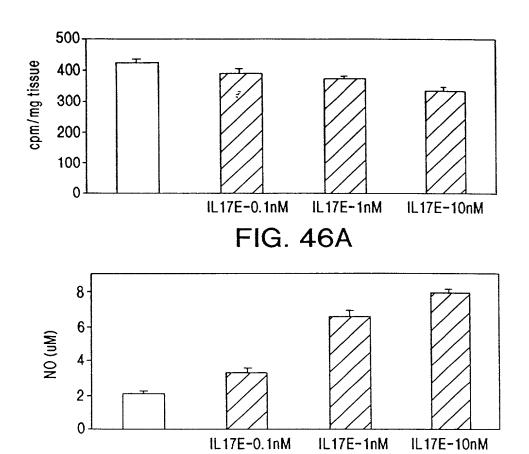


FIG. 46B

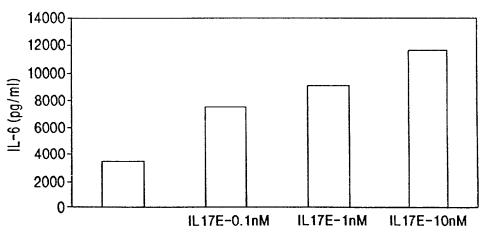
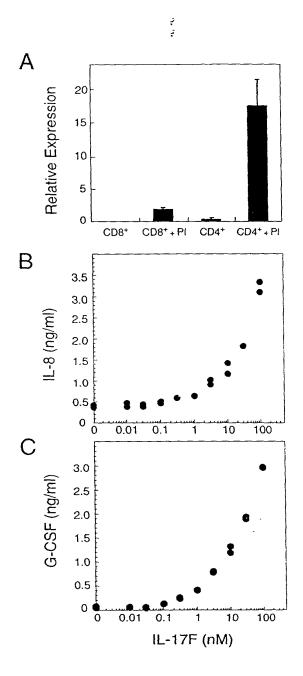
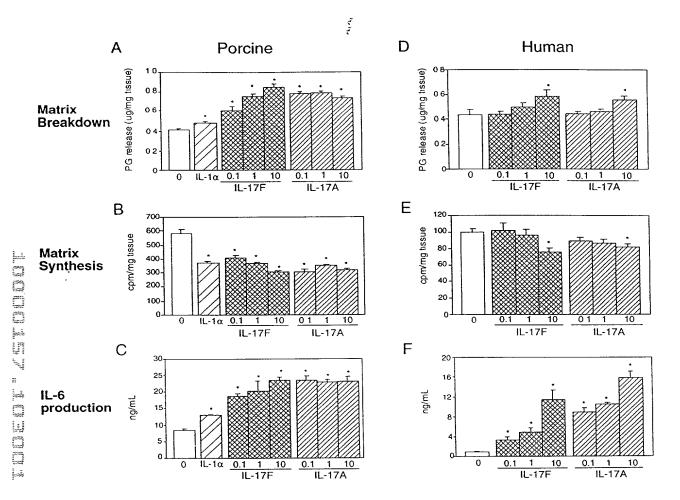


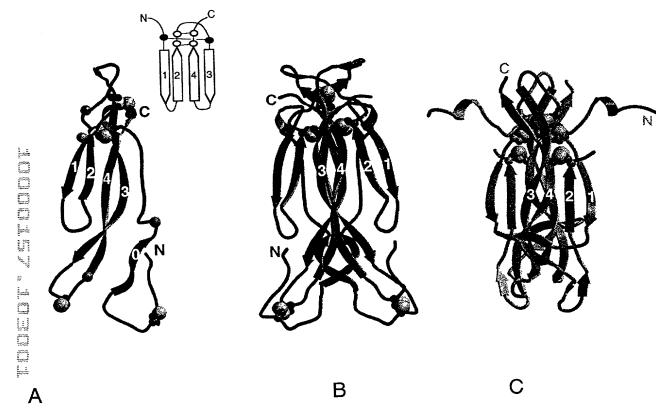
FIG. 46C



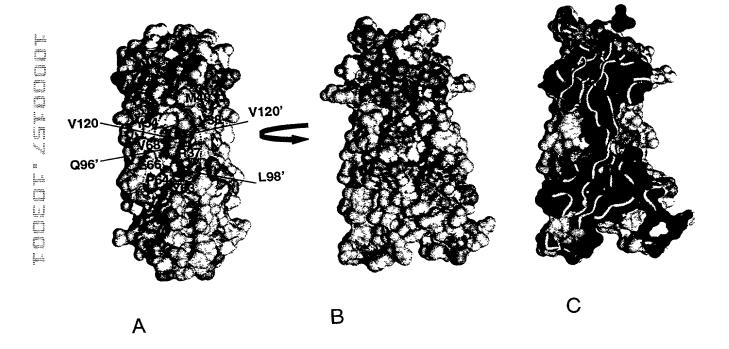
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Mikeline to the second second

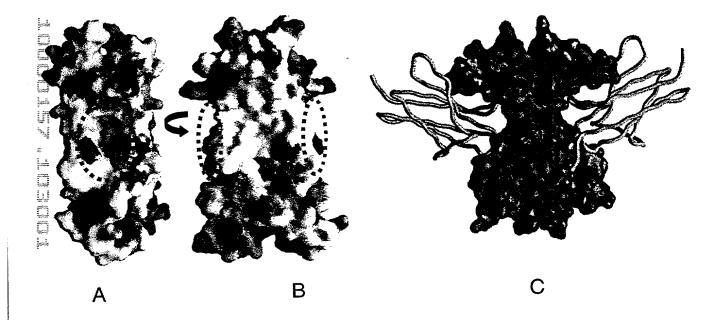




						*	
	TT17F		• • • • • • • • •		RKIPKVG	HTFFOKPES	17
	TT17A				TVKAG	TTTPRNP G	14
			PKSKRKGQGR				44
			HSHGTPH SYS				
			• • • • • • • • •				
			0			4	
			•				
			SMKLDI				
			TVMVNLNIHN				
			NSSELAQR	6744			
			HERPSATT	<b>~</b> ⊗			
4	IL-17E	STVPVPPLEP	ARPNRHPE	S RASE	.DGPLNSRAI	PWRYELDRD	65
7							
1							
=			2		3		
	TI17F	DNRVDSEVVO	AQ RNLG IN	A. OGKEDIS	MN VPT OOF	TIVVERKHOG	106
ž.			AK RHLG IN				
7			AR LELG VN				
ii g			AE L RG ID				
			AR L PH VS				
È				<del></del>	7		
			ļ	4			
		*	L	<del></del> -			
			SFQLEK				133
	IL-17A	PN	SFRLEK	ILVSVG T	<b>VTPIVHHVA</b>	• • •	136
	IL-17B	PPPPRTGP.	RQRA	VMETIAVG T	[ IF	• • •	160
			PGAFAFHTEF				184
	IL-17E	· HGEKGTHKG	Y LER	RLYRVSLA; V	VRPRVMG	• • •	145



3 100 H 20



# IL-17E is highly conserved between human and

mouse

85 ETDRDLANRIVPQ DLY HAR CLCPHCVSLQTG SHMDPLGN SIVPLYHNQTVFYRI 35 KEGEPPEEWUKWSSASVSPPEPLSHTHHAESCRASKOGPLNSRAISPWSY 43 KGGDTSEELLRWSTVPVPPLEPARPNRHPESCRASEDGPLNSRAISPWRY VAFLAMIVGTHTVSLRIQEGCSHLESCCES VAFLAMVMGTHT-----YSHWPSCCPS 1 MRERPRLGEDSSLISLFLQVVAFLAMVMGTHT mlL-17E mlL-17E HL-17E NL-17E

MIL-17E 135 RFCHGERGTHRRYCLERKLYKVSLACVCVKPKVMA NL-17E 143 RPCHGERGTHKGYCLERRLYRVSLACVCVRPRVMG

93 ELDRDLNRLPQDLYHARCLCPHCVSLQTGSHMDPRGNSELLYHNQTVFYR

mIL-17E

HL-17E

FIGURE <u>23</u>

04/99

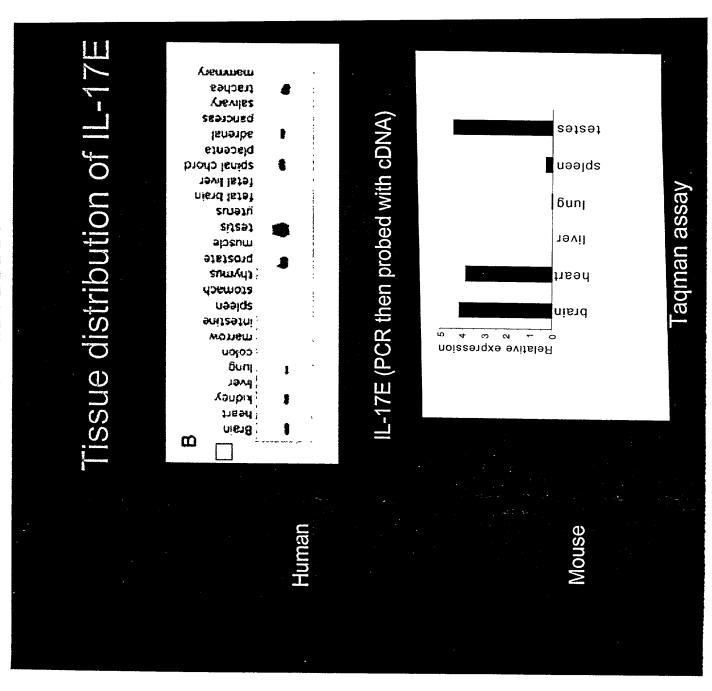
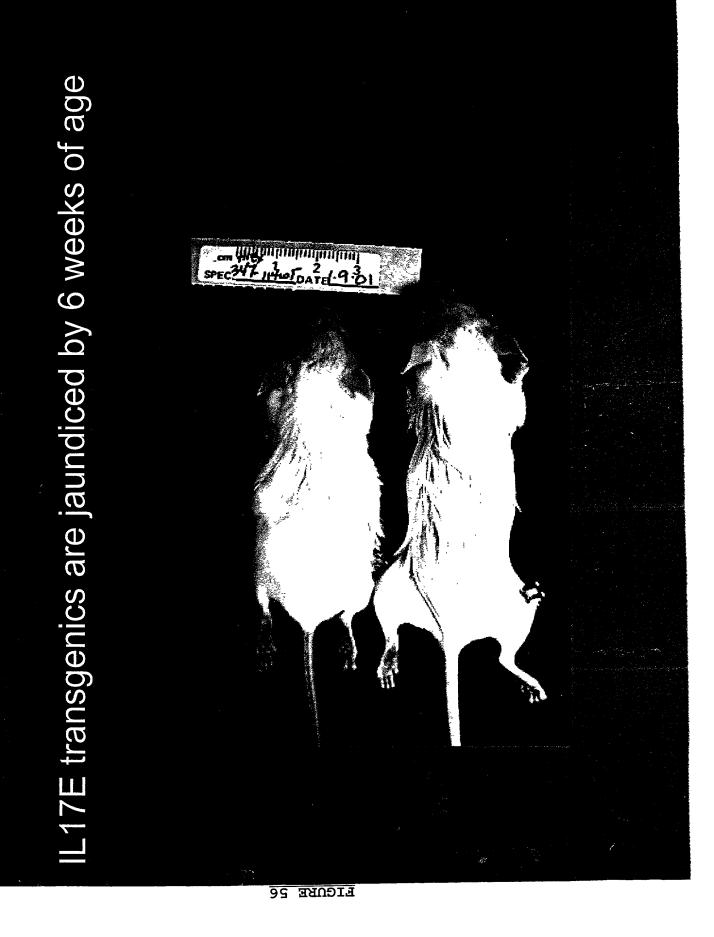
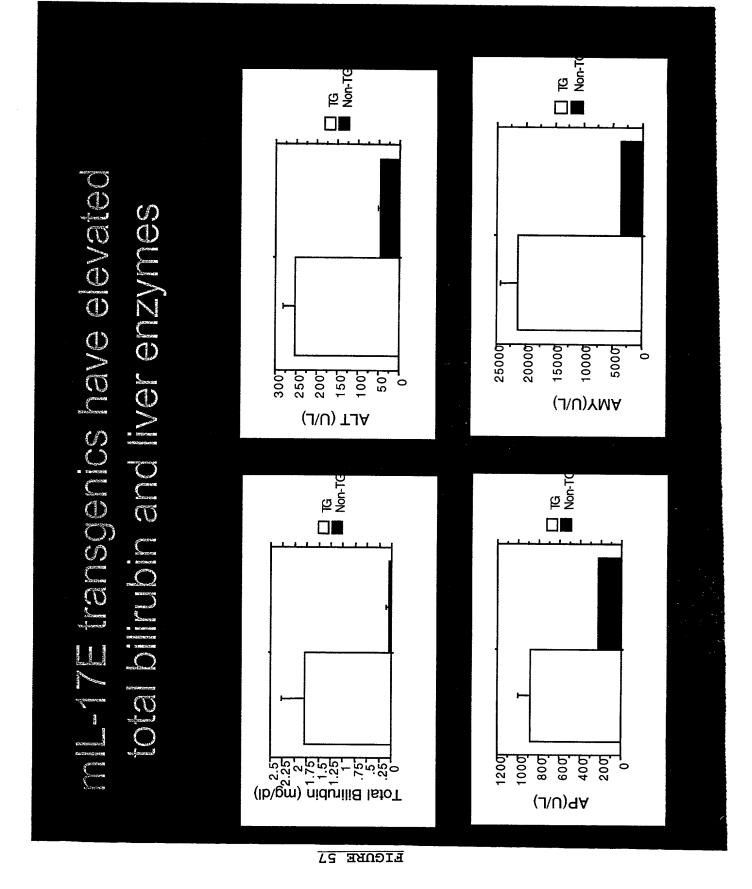


FIGURE 54

# MILITE Farsgenics are growth relarge <u>-</u>Tg Male Age (weeks) 0 10 30 20 × ဖ Female 0 10 50 30 Body Weight (g)

FIGURE 55

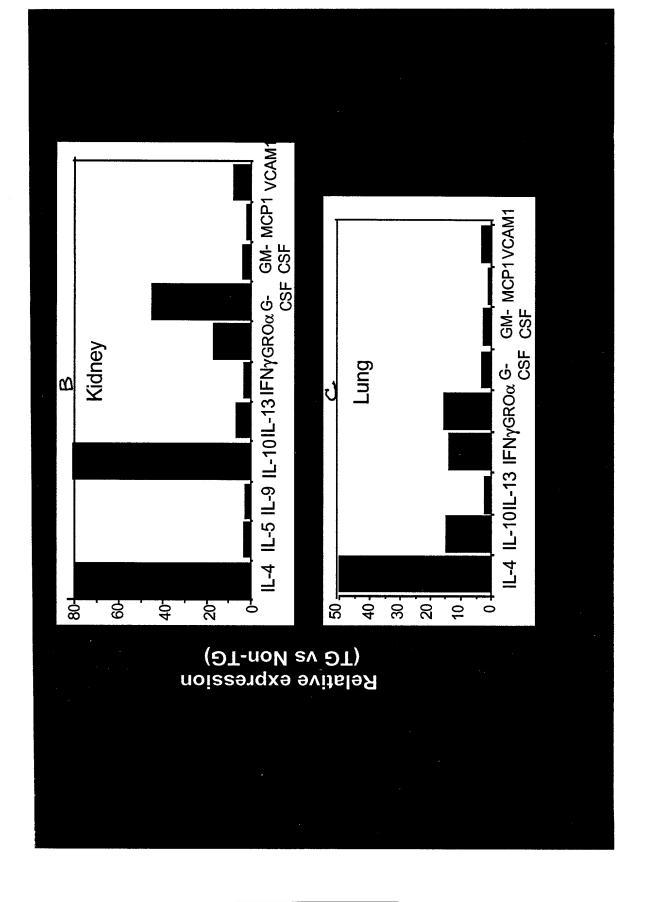




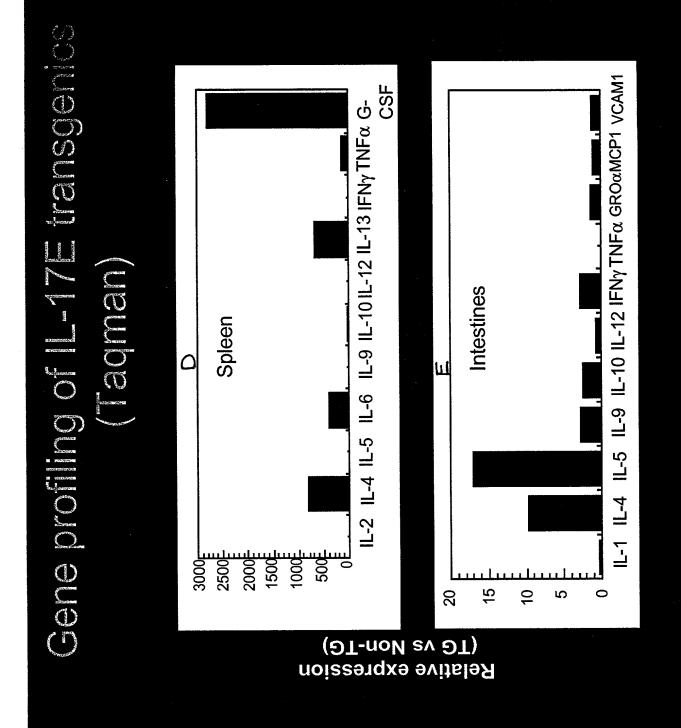
0L/69



FIGURE 58A

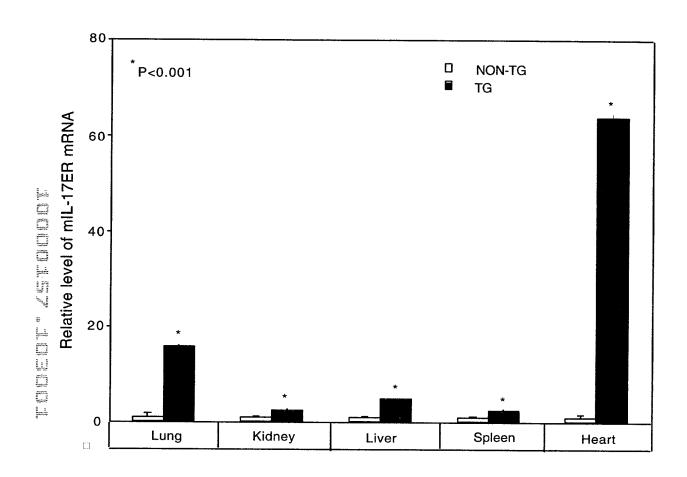


EIGNKES 28B - 28C

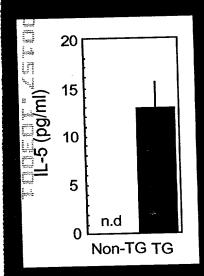


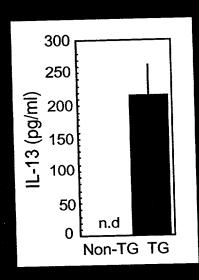
**EIGNKES 28D - 28E** 

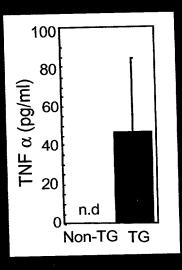
FIGURE 59



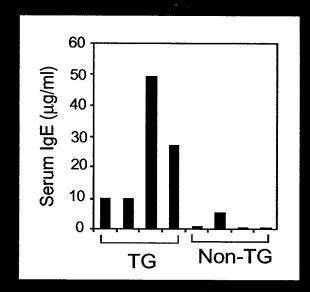
# Elevated serum IL-5, IL-13 and TNF α in mIL-17E transgenics

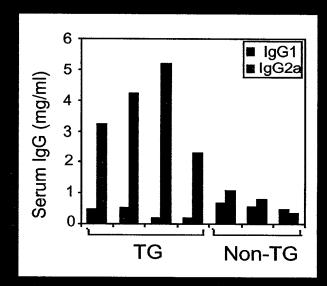




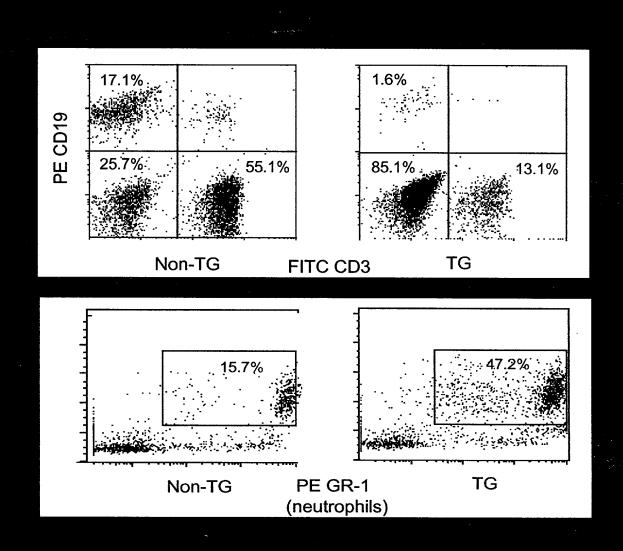


# Serum IgE and IgG1, but not IgG2a is elevated in mIL-17E transgenics

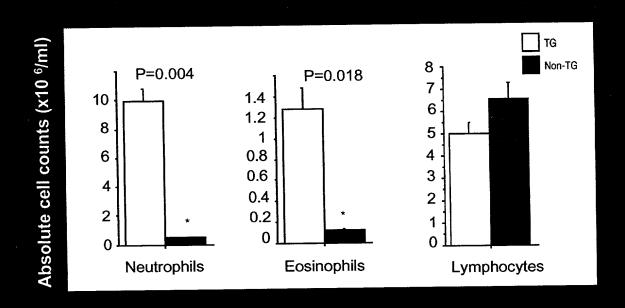




# Neutrophilia in mIL-17E transgenics (8 wks, PBMC by FACS)



# Neutrophilia and eosinophilia in mIL-17E transgenics (hematology)



# G-CSF is elevated in mIL-17E transgenics

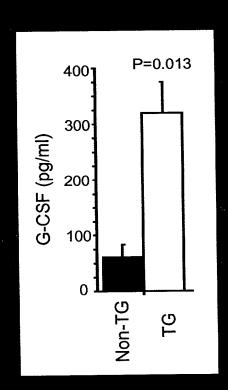


FIGURE 65

